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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666,115

09/19/2003

LeNoir E. Zaiser

2173.2004-001

8421

59242 7590 06/24/2008
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EXAMINER

SCHNEIDER, CRAIG M

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

06/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/666,115	Applicant(s) ZAISER ET AL.	
	Examiner CRAIG M. SCHNEIDER	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4,5,7-22 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4,5,7-18,24, 25, and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/19/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I in the reply filed on 5/28/08 is acknowledged.
2. Claims 19-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/28/08.
3. Claims 24-26 and 30 were previously restricted on 3/21/06. The examiner is rejoining claims 24, 25, and 30 because the apparatus claims of claims 7, 12, and 27 are not distinguishable from the method claims.
4. The claims that will be examined in the office action are 2, 4, 5, 7-18, 24, 25, and 27-30.

Drawings

5. The drawings are objected to because "230" in Figure 3 is not depicted clearly. Please resubmit Figure 3 with "230" clearly printed.
6. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

7. Claim 7 is objected to because of the following informalities:

In line 11 "if" should be --of--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 2 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The at least 17% of the surface area does not have support in the originally filed application. The originally filed application states "about 17%".

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 13 recites the limitation "the delivery pressures" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 7, 24, 25, 27, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Laswick et al. (6,055,981).

Laswick et al. disclose a pneumatic differential pressure valve to supply a quantity of a medium in response to an inhalation breath comprising a nozzle (102) in communication with a pressurized supply (3) of a medium and having a head for delivering the pressurized supply of the medium to a delivery outlet(103); a control chamber (99) capable of being pressurized and then depressurized in response to an inhalation breath; and a diaphragm (101) disposed between the nozzle head and the delivery outlet and controlled by pressure in the control chamber, wherein the diaphragm pneumatically seals the nozzle head when the control chamber is pressurized and pneumatically releases from the nozzle head in response to a reduction in pressure in the control chamber, and wherein the surface area of the nozzle head in contact with the diaphragm is computed so that the diaphragm pneumatically releases from the nozzle head in response to the inhalation breath without mechanical assistance (col. 10, lines 30-63).

Regarding claim 11, the control chamber of Laswick et al. is capable of being pressurized to at least about 22 psi.

Regarding claim 12, the gas reservoir for the supply gas is located at the end of line 3 of Laswick et al. The timing gas chamber is the control chamber (99).

Regarding claim 13 as understood, the gas reservoir and the timing gas chamber are pressurized to the delivery pressures. A delivery pressure is associated with both the gas reservoir and the timing chamber therefore each area is pressurized with the delivery pressure.

Regarding claim 27, the pilot valve (87) operates in response to an inhalation breath.

Regarding claims 24, 25, and 30; the method claims are anticipated by the apparatus of Laswick et al.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 4, 5, 8, 9, 14, 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Laswick et al. in view of applicant's admission of the filter element.

Laswick et al. disclose all the features of the claimed invention except that the nozzle includes a filter element at the interface with the diaphragm and has a porosity of about 20 micrometers. Applicant's admission (page 11, line 27 to page 12, line 2) that

“Returning to Fig. 2, it should be apparent that the nozzle 115 can be enlarged such as shown in Fig. 4, including with the porous filter element 360.” is being utilized to include a filter element at the nozzle (102) of the Laswick et al. device as disclosed above.

It would be obvious to one of ordinary skill in the art at the time the invention was made to utilize a filter element as disclosed by applicant's admission with the nozzle of Laswick et al., to filter the air.

Regarding claim 5, the applicant discloses that the filter element (360) has a porosity of 20 micrometers (page 10, lines 3-5).

Regarding claim 16, the applicant discloses that the filter element is constructed of sintered bronze.

17. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laswick et al.

Laswick et al. disclose all the features of the claimed invention except that the interface between the diaphragm and the nozzle is at least 17% of the surface area of the diaphragm.

It would have been an obvious matter of design choice to a person of ordinary skill in the art at the time the invention was made to have the surface area of the nozzle head to be at least 17% of the surface area of the diaphragm in contact with the control chamber because applicant has not disclosed that the 17% of the surface area of the diaphragm in contact with the control chamber provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with any

percentage of the nozzle head surface area in contact with the control chamber because the percentage of the surface area would be governed by the pressures needed to hold/release the diaphragm from the nozzle head. Therefore, it would have been an obvious matter of design choice to modify Laswick et al.'s nozzle surface area of the diaphragm to obtain the invention as specified in claims 2 and 10.

18. Claims 17, 18, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laswick et al.

Laswick et al disclose all the features of the claimed invention except that the substantially balanced force comprises having a ratio of the nozzle head force to the timing gas chamber force of less than 1:2.4.

It would have been an obvious matter of design choice to a person of ordinary skill in the art at the time the invention was made to have the ratio of the opposing pneumatic forces from the nozzle head to the timing gas chamber force be less than 1:2.4 because applicant has not disclosed that the 1:2.4 ratio provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with any ratio between the timing gas chamber force on the diaphragm and the nozzle head force on the diaphragm that would respond to a persons inhalation breath. Therefore, it would have been an obvious matter of design choice to modify the ratio of Laswick et al.'s nozzle head force and the timing gas chamber force on the diaphragm to obtain the invention as specified in claims 17, 18, 28, and 29.

Response to Arguments

19. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jackson (4,821,767 and 6,016,802) disclose a diaphragm that is responsive to an inhalation breath which when flexed allows oxygen to go to a mask.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG M. SCHNEIDER whose telephone number is (571)272-3607. The examiner can normally be reached on M-F 8:30 -5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. M. S./
Examiner, Art Unit 3753
June 20, 2008

/John Rivell/
Primary Examiner, Art Unit 3753